

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)
2. (Previously Presented) A condensation heat exchanger adapted to interface with a gas or fuel-oil burner, the condensation heat exchanger comprising two coaxial tube bundles placed end-to-end, one of which acts as primary exchanger and the other of which acts as secondary exchanger, each of these bundles comprising at least one of a tube or of a group of tubes arranged end-to-end, forming a helical coil, in which the wall of the tube(s) is produced from a material that is a good conductor of heat and has a flattened, oval cross section, the major axis of which is perpendicular or approximately perpendicular to the axis of the helix, wherein the width of the gap separating two adjacent turns is constant and smaller than the thickness of said cross section, said bundles being mounted securely inside a gas-impermeable jacket, the condensation heat exchanger further comprising a device adapted to circulate at least one fluid to be heated inside the tube(s) forming said bundles, said jacket having a burnt-gas-evacuation sleeve, the exchanger being arranged such that hot gases generated by the burner flow radially, or approximately radially, through said bundles, passing through gaps separating turns of the bundles, a deflection plate being interposed between these two bundles and arranged in such a manner that hot gases generated by the burner first flow through the primary exchanger, flowing through the gaps separating its turns from the inside to the outside, then through the secondary exchanger, flowing through gaps separating its turns from the outside to the inside, after which the hot gasses are evacuated to the outside via said sleeve, wherein said jacket has a wall portion having the configuration of a compartment and the condensation heat exchanger is provided with an additional gas/air heat exchanger/recuperator that is inserted inside said compartment and is adapted for recovering some heat conveyed by the hot gases circulating between the secondary exchanger and the exit sleeve and transferring heat to air captured outside the exchanger, the condensation exchanger further including a device adapted to transfer the air heated by the additional gas/air heat exchanger/recuperator to the entrance of said burner.

3.-15. (Canceled)

16. (Currently Amended) The heat exchanger as claimed in claim [[1]] 2, wherein said compartment comprises a substantially flat pocket that extends vertically and is open at its top and bottom ends, said gas/air heat exchanger/recuperator being inserted in the compartment.

17. (Previously Presented) The heat exchanger as claimed in claim 16, wherein said gas/air heat exchanger/recuperator includes two series of metal-walled adjacent, alternating vertical tubes, wherein a first series allows the passage of the hot gases circulating between the secondary exchanger and the exit sleeve and a second series allows the passage of outside air to be heated.

18. (Previously Presented) The heat exchanger as claimed in claim 17, wherein said tubes have a flattened cross section and are adjacent via their faces corresponding to the larger sides of the cross section.

19. (Previously Presented) The heat exchanger as claimed in claim 18, wherein said gas/air heat exchanger/recuperator is produced from a single, concertina-folded sheet of metal.

20. (Previously Presented) The heat exchanger as claimed in claim 17, wherein one of said series of vertical tubes is open at the top and bottom, allowing top-to-bottom passage of the outside air to be heated, while the other series of vertical tubes opens out inside the jacket via entry and exit openings for the flue gases made in the wall of the compartment, in its base and in its upper part, respectively.

21. (Currently Amended) The heat exchanger as claimed in claim [[1]] 2, wherein said gas/air heat exchanger/recuperator is removable and may easily be taken out of the compartment.

22. (Previously Presented) The heat exchanger as claimed in claim 21, wherein said gas/air heat exchanger/recuperator has the configuration of a substantially parallelepipedal rectangular cassette adapted to be pushed into the compartment through translation from top to bottom, the cassette being provided with a rigid tubular casing of rectangular cross section, open at its lower and upper ends, and wherein said gas/air heat exchanger/recuperator includes two series of metal-walled adjacent, alternating vertical tubes, a first series of the two allowing for the passage of the flue gases and a second series of the two allowing for the passage of the outside air to be heated, these tubes being arranged hermetically inside said casing, wherein suitable windows made in a larger face of the casing, in its base and in its top part, allow for, respectively, the entry and the exit of the flue gases in the first series of tubes.

23. (Previously Presented) The heat exchanger as claimed in 20, wherein said gas/air heat exchanger/recuperator is removable and may easily be taken out of the compartment, wherein said gas/air heat exchanger/recuperator has the configuration of a substantially parallelepipedal rectangular cassette adapted to be pushed into the compartment through translation from top to bottom, the cassette being provided with a rigid tubular casing of rectangular cross section, open at its lower and upper ends, and includes two series of metal-walled adjacent, alternating vertical tubes, a first series of the two allowing for the passage of the flue gases and a second series of the two allowing for the passage of the outside air to be heated, these tubes being arranged hermetically inside said casing, wherein suitable windows made in a larger face of the casing, in its base and in its top part, allow for, respectively, the entry and the exit of the flue gases in the first series of tubes, and wherein bottom and top windows are dimensioned and positioned such that one is opposite the entry opening and the other is opposite the exit opening for the flue gases are present in the wall of the compartment when the cassette is fully inserted inside said compartment.

24. (Previously Presented) The heat exchanger as claimed in claim 23, wherein said cassette is equipped in its base with a peripheral seal capable of guaranteeing its leak tightness in the bottom of the compartment.

25. (Previously Presented) The heat exchanger as claimed in claim 22, wherein said casing is provided in its upper part with a peripheral rim capable of ensuring that it at least one of bears and is fixed against an upper edge of the compartment.

26. (Previously Presented) The heat exchanger as claimed in claim 22, wherein said gas/air heat exchanger/recuperator includes a pair of plates in the form of grilles having solid areas that are fixed by nesting and adhesive bonding to upper and lower edges of the two series of tubes such that they block off those of the first series receiving the flue gases, these solid areas being separated by slits that form mouths of the tubes of the second series that allow the passage of the outside air to be heated.

27. (Currently Amended) The heat exchanger as claimed in claim [[1]] 2, wherein the bottom of the heat exchanger has orifices for recovering and evacuating condensates generated both by condensation of the flue gases and by condensation of combustion air inside the gas/air heat exchanger/recuperator.

28. (Previously Presented) A removable gas/air heat exchanger/recuperator designed for equipping a heat exchanger as claimed in claim 22.

29. (Currently Amended) The heat exchanger as claimed in claim [[1]] 2, wherein the fluid to be heated is cold water.

30 – 32. (Cancelled)

33. (Previously Presented) The heat exchanger as claimed in claim 2, wherein the device adapted to transfer the air heated by said gas/air recuperator is a fan.